

ZAKRZEWSKI JANUSZ

POLAND / Chemical Technology. Chemical Products and Their Application. Water treatment. Sewage water H-5

Abs Jour : Ref. Zhur. - Khimiya, No 2, 1958, No 5068
 Author : Glinicki Zdzislaw, Roman Marek, Zakrzewski Janusz
 Inst : Not Given
 Title : Effect of Water Purification by the Method of Contact Coagulation
 Orig Pub : Gaz, woda, techn. sanit., 1956, 30, No 8, 305-309
 Abstract : The theoretical foundations of contact coagulation are considered. An account is given of the results of experiments, carried out in an
 Card : 1/2

POLAND / Chemical Technology. Chemical Products and Their Application. Water treatment. Sewage water
 APPROVED FOR RELEASE: 09/19/2001 CIA-RDP86-00513R001963620012-1

Abs Jour : Ref. Zhur. - Khimiya, No 2, 1958, No 5068

Abstract : experimental unit, on treatment of ground water containing up to 1.15 mg/liter of Fe (without coagulant and using $Al_2(SO_4)_3$). On contact coagulation a better effect was achieved than on bulk coagulation.

Card : 2/2

POLAND / Chemical Technology. Chemical Products H-5
and Their Application. Water treatment. Sewage
water

Abs Jour : Ref. Zhur. - Khimiya, No 2, 1958, No 5069

Abstract : action efficacy of individual layers of the
filter (without and with the use of coagulant).
It was found that participation of individual
layers of the filter is unequal. Filtration
must be effected from the bottom upwards, and
the top layer must consist of the smallest
particles.

Card : 2/2

POLAND/Soil Science. Organic Fertilizers.

J-4

Abs Jour: Ref Zhur-Biol., No 6, 1958, 24774.

Author : Zakrzewski, Jan.

Inst :

Title : Agricultural Utilization of Urban Sediments and
Sewage.

Orig Pub: Gaz, woda, techn. sanit., 1957, 31, No 3, 82-86.

Abstract: Data is cited on the structure of deposits and their
influence on the yield, according to data from the
USSR and other countries. The utilization of the
activated sediments dried during increased tempera-
ture is recommended, since it does not contain seeds
of weeds and pathogenic germs and endures transpor-
tation for considerable distances.

Card : 1/1

ZAKRZEWSKI, J.

"The use of irrigation apparatus widens in the world."

p. 525 (Gospodarka Wodna) Vol. 17, no. 11, Nov. 1957
Warsaw, Poland

SO: Monthly Index of East European Accessions (EEAI) LC. Vol. 7, no. 4,
April 1958

ZIMMERMAN, J.

"An Attempt at Establishing the Succession of Access for India, etc", p. 14,
(JOURNAL OF THE ICA, Vol. 15, No. 1, Jan. 1955, Warsaw, Poland)

33: Monthly List of East European Accessions, (JEML), IC, Vol. 4, No. 5,
May 1955, Uncl.

ZIMMERTON, J.

"Combating Soil Erosion by Means of Borrowed Terrace Ditches", p. 366,
(GOSPODARSTWA WODNA, Vol. 14, No. 9, Sept. 1954, Warsaw, Poland)

SO: Monthly List of East European Accessions, (LEML), LC, Vol. 1, No. 5,
May 1955, Uncl.

ZAKRZEWSKI, J.

(HORYZONTY TECHNIKI, Vol. 6, No. 10, Oct. 1953, Warszawa, Poland)

"Peat." p. 434

SO: MONTHLY LIST OF EAST EUROPEAN ACCESSIONS, L.C., Vol. 3, No. 4, APRIL 1954

GAJEWSKI, W.; SUCHORZEWSKA, J.; VOTRUBA, M.F.; ZAKRZEWSKI, J.

The production of light mesonic hyperfragments and Li^3 fragments from the interactions of K^- mesons of 1.3 and 1.5 GeV/c momenta. Acta physica Pol 27 no.2:329-334 F '65.

1. Institute of Experimental Physics of the Warsaw University and Institute of Nuclear Research, Warsaw (for Gajewski), Suchorzewska, Zakrzewski). 2. Institute of Physics of the Czechoslovak Academy of Sciences, Prague (for Votruba). Submitted June 18, 1964.

ZAKRZEWSKI, Jan, inz.

Feeding the signaling arrangements in stations. Przegl kolej
elektrotech 10 [i.e. 15] no.10:290-293 0 '63.

ZAKRZEWSKI, J. (Lodz)

A certain inference method in statistical quality control
of textile products and intermediate products. Zastos mat 7
no.3:271-289 '64.

ZAKRZEWSKI, Jan, mgr inż.

Suggestion for dynamic methods of calculating electric meters. Pomiary 9 no.6:229-232 Je '63.

1. Instytut Elektrotechniki, Zakład Automatyki i Miernictwa,
Pracownia Przyrządów Masowych, Szczecin.

P/034/63/000/003/003/003
D201/D308

AUTHOR: Zakrzewski, Jan, Master of Engineering
TITLE: Electrostatic voltmeter design procedure
PERIODICAL: Pomiar. Automatyka. Kontrola, no. 3, 1963, 109

TEXT: A short review and discussion is given of the article by G.K. Ogram "Metodyka obliczeń woltomierzy elektrostatycznych z równomierną podziałką" (Linear Scale electrostatic voltmeter design procedure), which appeared in 1959 in "Prace Wszechzwiązkowego Naukowo-Badawczego Instytut Elektrycznych Przyrządów Pomiarowych", in which the author discusses the design of linear scale voltmeters having a variable active area of plane electrodes. The author states that the most valuable contribution of the article is the Chapter dealing with the determination of the linearizing parameter Ψ of the scale as used in the well-known Zalewski linearization formula $\frac{ds}{d\alpha} = \frac{k}{\alpha + \Psi}$ and with the effect of the return spring resistance on the frequency error.

Card 1/1

ZAKRZEWSKI, Jan, inż.

Emergency feeding sets of signaling installations. Przegl
kolej elektrotech 11 no.11:282-286 N '64.

POLAND

ZAKRZEWSKI, Janusz

Institute of Experimental Physics, Univ. of Warsaw
(Instytut Fizyki Doswiadczalnej Uniwersytetu Warszawskiego)

Crakow, Postepy fizyki, No 5, Sept-Oct 1965, pp 525-543

"Discovery of heavy hypernuclei."

BARAN, Jozef; SEMKOWICZ, Andrzej; ZAKRZEWSKI, Jerzy

New system of the accelerated voltage stabilizer of the U-120 cyclotron. Nukleonika 7 no.11:737-740 '62.

1. Instytut Fizyki Jadrowej, Pracownia Cyklotronu, Krakow.

SEMKOWICZ, Andrzej; SULIKOWSKI, Jerzy; SZOT, Waldemar; ZAKRZEWSKI, Jerzy

Voltage stabilizer of the cyclotron deflector. Nukleonika
7 no.11:741-742 '62.

1. Instytut Fizyki Jadrowej, Polska Akademia Nauk, Krakow.

P/046/62/007/011/005/005
D256/D308

AUTHORS:

Semkowicz, Andrzej, Sulikowski, Jerzy, Szot, Walde-
mar and Zakrzewski, Jerzy

TITLE:

Cyclotron deflector voltage stabilizer

PERIODICAL:

Nukleonika, v. 7, no. 11, 1962, 741-742

TEXT:

The original control system of the deflector voltage of the 120 cm Cracow cyclotron has been found unsatisfactory: as the system relied upon a variac transformer in the power supply of the rectifier, the voltage stability was inadequate and there was no means of smooth regulation of the voltage. An additional electronic stabilizer was installed producing 0.3% stability on the deflector plate at 10% fluctuations of the power supply. The circuit consists of: 1) a Tesla MT9F regulator tube; 2) a comparator circuit in which a voltage obtained from a potential divider and proportional to the deflector voltage is compared with a reference voltage; 3) a two stage d.c amplifier. The difference between the voltage derived from the potential divider and the reference voltage is amplified

Card 1/2

94-6810
AUTHORS.

AUTHORS: Podgancov, J., Daryaz, N., Pilipovskii, A., Shchult, E.,
Sklyarenko, V., Sobolevskii, A., and Zarkovskii, A.

TITLE: Determination of the Mass of the

TITLE

... of the Λ^0 Hyperon

TEXT: The energy of the decay $\lambda^0 \rightarrow \pi^+ \pi^-$ is 1300 , vol. 13, no. 1, pp. 277 - 287

1967, The energy of the decay $\Lambda^0 \rightarrow p + \pi^-$ measured in recent years by several groups of investigators using chamber and emulsion techniques has been found to be in good agreement. However, the results obtained by error methods in some cases that are large in comparison to the determined value. On account of its importance, we have tried to determine the mass of Λ based on large statistics, without then tried to the hypothesis, the mass of Λ based on nuclear emulsions. As a sample of Λ of 80 players, those the K mesons in nuclear emulsions. They were enriched K beam ($\sim 600^\circ$ of 11ford 65 emulsion). They used a statistical factor of this emulsion they found the statistical error for the estimates by two independent methods to be $\pm 2.21 \pm 0.027 \pm 0.027$ MeV stopping power of the emulsion was found to be $R_{\Lambda}^{\text{exp}}/\Lambda = 1.002 \pm 0.003$.

Card 1/3

[illegible]

Card 2/3

12 references; 1 Soviet, 3 US, 5 Italian, and 1 Dutch.

Institute of Physics, Warsaw University, and Institute of Nuclear Research, Warsaw

Cord 5/3

ZAKRZEWSKI, Janusz

Multinucleonic captures of K^- mesons. Postępy fizyki no.4:405-417
'60.

1. Instytut Fizyki Doswiadczalnej Uniwersytetu Warszawskiego, Warszawa.

ZAKRZEWSKI, Juliusz

Probabilistic analysis of trichinascopy. Wiadomosci parazyt. 8 no.1:
97-105 '62.

1. Technical University of Lodz.

(TRICHINOSIS transm) (MEAT parasitol)

ZAKRZEWSKI, J.

The utilization of waste water in the city of Memmingen. p. 394
(GAZ, WODA I TECHNIKA SANITARNA Vol. 30, No. 10 Oct. 1956 Warsaw, Poland)

SO: Monthly List of East European Accessions (EEAL) LC, Vol. 6, No. 9, Sept. 1957
Uncl.

ZAKRZEWSKI, Jerzy
YURKOVSKIY, E. [Jurkowski, Edmund]; ZAKZHEVSKIY, Ye. [Zakrzewski, Jerzy];
BURICH, V. [translator]; SERIN, V.A., nauchnyy red.; BEKEZOVSKAYA,
A.L., red.; NEZAYZLOVA, L.M., tekhn. red.; DORODNOVA, L.A., tekhn.
red.

[Furniture manufacture] Porizvodstvo mebeli. Moskva, Vses. uchebno-
pedagog. izd-vo Proftekhizdat, 1961. 335 p. (MIRA 14:12)
(Poland—Furniture industry)

ZAKRZEŃSKI J. Z Oddziału Zakaźnego Państwowego Szpitala św. Łazarza w Krakowie. Śmiertelność z duru brzusznego u szczepionych i nieszczepionych Mortality from typhoid fever in vaccinated and non-vaccinated cases Przegląd Lekarski, Cracow 1949, 5/18 (546-547) Tables 1

In 1947 and 1948 out of 169 patients, there were 122 persons vaccinated longer than two years previously or not vaccinated at all, and 47 vaccinated. In the non-vaccinated group eight persons died, in the vaccinated group, one.

Kezar - Gdansk (XX, 4, 6, 7,)

So: Medical Microbiology and Hygiene, Section IV, Vol 3, No 1-6

WEGRZYNOWSKA, K.; WESTRYCH, F.; ZAKRZWEKI, J.

Results of the treatment of pulmonary tuberculosis with Csala's method.
Przegl. lek., Krakow 9 no.2:46-47 1953. (CJML 24:5)

1. Of the Surgical Department of the Third Internal Clinic (Head--Prof.
Julian Aleksandrowicz, M.D.) of Krakow Medical Academy.

ZAKRZEWSKI, J.

A project for improving the calculations of measurement indicators in textile metrology. p.3

PRZEGLAD WLOKIENNICZY. (Stowarzyszenie Inzynierow i Technikow Przemyslu Wlokienniczego) Lodz, Poland.
Vol.13, no.1, Jan. 1959

Monthly list of East European Accessions (EEAI) LC, Vol.9, no.1, Jan. 1960

Uncl.

ZAKRZEWSKI, J.

TECHNOLOGY

PERIODICAL: ARCHIWUM BUDOWY MASZYN Vol. 5, no. 4, 1958

ZAKRZEWSKI, J. An analysis of the tension and shape of thread during the work of ring, cap, and centrifugal spindles. p. 457.

Monthly List of East European Accessions (EEAI) LC, Vol 8, no. 4.
April 1959, Unclass

ZAKRZEWSKI, J.

270

677.21.03 : 677.021 : 65.011

Zakrzewski J., Lenc J. A New Method of Arranging Weft Blends of Cotton Waste.

„Nowa metoda ustalania skladow mieszanek na watki odpadkowe” (Prace Inst. Wlók. No. 3), Warszawa, 1953, PWT, 10 pp., 5 figs., 21 tabs.

The method hitherto adopted for determining blends by fixing the percentage of each component possesses numerous disadvantages, since, by giving no consideration to planning the waste pool and giving the composition of mixtures according to individual grades of waste, it made rational utilisation impossible. This used to result in frequent changes, having to be made in blend recipes — a most burdensome procedure. The new method does not deal with the scores of waste grades but introduces the conception of waste groups, four in all. Spinability was the chief consideration in arranging these groups. It is possible, by analysing them from this point of view, to substitute one grade for another of a similar spinning quality. The percentage of each waste group in a blend depends on analytical calculation. The requisite technical conditions are taken into consideration by introducing coefficients corresponding to the groups. Waste pool and weft production are planned according to the group basis fixed by the new method. The method was tried on an industrial scale, technological experiments being made with three blends. A fourth, corresponding to former formulae, was carried out for the purpose of comparison. Laboratory tests of yarn, grey and finished cloth, fully substantiated the suitability of the new method. The three blends contained a similar percentage of waste groups, though the waste grades in each differed. The test results were almost identical and, generally speaking, more satisfactory than those carried out by the comparison method.

Polish Technical Abst.
No. 1 1954
Textile Leather and Paper
Industries

ZAKRZEWSKI, J

"Parabolic approximation of the course of a harness frame." (To be contd.) p. 256
(Przemysl Wlokienniczy, Vol. 7, No. 11/12., Nov./Dec., 1953, Lodz)

SO: Monthly List of East European Accessions, Library of Congress, Vol. 3, No. 6, June.
1954, Uncl.

ZARR 2 EW 5 15, J.

739. PROBLEMS RELATING TO INCREASE OF EFFICIENCY OF ROTARY KILNS.
 Zelazowski, J. (Cement-factory-kilns (Cement, Lime, Gypsum, Bauxite), 1956,
 vol. 12, (20), 195-201, 247-252; electr. in Chem. Abstr., 1957, vol. 51, 225).
 The author analyzes the kiln fired with coal dust of the slurry feed method.
 With a constant velocity of injected coal dust the flame has a maximum length

and 8.0% on a slurry with 500 openings/sq.cm. The flame length was only approximately 150 cm when
 maximum, 7.4% 131.5 cm. The flame length was only approximately 150 cm when
 the residue on the 1500 slabs dropped to 6.1% or when it increased to 10.1%.
 The length of flame dropped very rapidly with further decrease of residue on
 the 1500 slabs. In all these cases the coal dust had a 1% residue on the
 slabs with 500 openings/sq.cm. However, the flame should have an optimum
 length which depends on the technology of the process. A short flame gives
 high temperature and a long flame low temperature. Addition of steam to the
 burning coal dust lengthens the flame. The author proves that heat from
 internal radiation should be considered in designing cement rotary kilns;
 thus kilns with an enlarged sintering zone have better throughput (the
 converging part in this zone reflects the heat). Other problems considered
 are: heat exchange in the kiln, radiation of glowing coal particles, rev/min
 of the kiln (there is a tendency in U.S.S.R. to increase rev/min of rotary
 cement kilns), and the quality of raw materials from the point of view of good
 heat exchange. The author recommends: (1) cooling the kiln mantle around
 the sintering zone by spraying it with water (this permits an increase in
 internal heat load), (2) addition of steam or carbon dioxide to the primary
 air to increase intensity of radiation (this requires addition of oxygen to
 the air), (3) installation of a ceramic reflector at the end of sintering zone
 (to reduce the heat loss caused by internal radiation), (4) reduction of water
 content in the slurry feed, (5) installation of an exhaust fan, (6) addition
 of lime to the sintering zone, and (7) use of long flame.
 C.A.

L 23559-65 EWT(a)/FSS-2/EWT(m)/EWA(h) En-4

AM5000924

BOOK EXPLOITATION

P/

13
641

Zakrzewski, Jerzy

The city in a nuclear war (Miasto w wojnie jądrowej) [Warsaw] Wyd-
wo MON, [1964] 0327 p. illus., biblio. Errata slip inserted.
2000 copies printed.

Series note: Biblioteka polskiej myśli wojskowej

TOPIC TAGS: nuclear warfare, military tactics, warfare

PURPOSE AND COVERAGE: This book is intended for the military reader
as well as for civilians concerned with nuclear warfare. The book
discusses nuclear and rocket warfare conducted in cities and in-
dustrial regions, including the effects of nuclear aggression, the
purposes and means of nuclear and rocket warfare in such areas and
regions, and some aspects of defensive and offensive operations
there. There are 42 illustrations, numerous references in the
text, and a bibliography.

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SUB CODE: CB, MS SUBMITTED: 17Dec63

NO REF SOV: 058

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CA

112

The structure of the somatic antigen of *Shigella dysenteriae*.
Kusumoto and Saito. *Med. Doctrines in Microbiol.* 2, 1-18 (1960); cf. Morgan and Partridge, *C.A.* 34, 4143; 35, 2591. — The antigen (I) is extd. from acetone powder of *Shigella dysenteriae* by ethylene glycol; the ext. is centrifuged, supernatant filtered, concd. in vacuum, and dialyzed. I is pptd. from the dialysed soln. by 75% acetone, and then lyophilized. A 2% soln. of I in formamide is treated with 66% EtOH at -10° to remove all fats. I so purified is used in all fractionation expts. Acid hydrolysis yields a simple polysaccharide and a protein complex. Alkali hydrolysis gives a complex polysaccharide and a simple protein. The protein complex is composed of a protein and a nucleoprotein (II). The protein of II is the immunologically active component, as ribonuclease does not affect the serological reactions in vivo of II. Trypsin impairs the precipitation reaction of II but does not influence its antigenicity.
I. Z. Roberts

1961

ZAKRZEWSKI, K.

Structure of somatic antigen of *Shigella shigae*. Med.dosw.mikrob.
2 no.2:184-185 1950. (CIML 20:6)

1. Summary of the report given at 10th Congress of the Polish Microbiological and Epidemiological Society held in Gdansk, Sept. 1949. (Warsaw.)

CA

118

Determination of lead in blood. K. Zakrzewski, J. Malce, and A. Komar (Akad. Med., Warsaw, Poland). *Med. Doświadcz. i Mikrobiol.* 2, 577-85(1950).—Blood samples (10 ml.) were digested in micro-Kjeldahl flasks by boiling with concd. HNO_3 15 and then adding concd. H_2SO_4 2 ml. The carbon-matter was oxidized by adding H_2O_2 dropwise and boiling until SO_3 fumes appeared. The digest was heated with 10 ml. 10% NH_4 oxalate until white fumes appeared. Distil. H_2O 10 and NH_4 citrate 10 ml. were added and the flask was cooled. The soln. was neutralized to the phenolphthalein end point with concd. NH_4OH and transferred to a separatory funnel. The flasks were rinsed

with 2 portions of hot 10% NH_4OAc 10, distil. H_2O 10, 0.5% KCN 10, and H_2O 10 ml. The washes were combined with the digest and the soln. was extd. with a CHCl_3 soln. of di-thizone in the presence of NH_4OH (2 ml. of 25%). Pb was detd. as described by Horvitt and Cowgill (*C.A.* 31, 7041) a titrimetric method being used. The wet digestion is an improvement over the previously described procedures.

I. Z. Roberts

113

2A

Bacterial viruses. Concentration and purification of a bacterial virus by means of centrifugal adsorption. K. Zakrzewski, J. Kocielek, and K. Murawski (Akad. Medy-
cynv, Warsaw, Poland). *Med. Doświadczalne i Mikrobiol.*
3, 95-104(1961).—A phage (F₁) was grown on *E. coli*
P211-55 for 5 hrs. at 37° and 14 hrs. at room temp., then
filtered. This filtrate was centrifuged with a Sharples
centrifuge (20,400 g); the tube of the centrifuge was lined
with a 3-mm. layer of fuller's earth satd. with glycine-HCl
buffer at pH 4.6. The purification (as detd. by the in-
fectiousness of the virus) was double the theoretical capacity
for concn. of the virus in one run (20 times). I. Z. R.

1751

PTA

5

1448

612.1 : 612.4 : 519.515

Zakrzewski K. Determination of Lead Content in Physiological Fluids of the Human Organism.

„Oznaczanie zawartości ołowiu w płynach ustrojowych”. Bezpieczeństwo i Higiena Pracy. No. 7, 1951, pp. 227—229.

Determination by microanalysis of the lead content in fluids of the human organism, primarily in blood, has been made possible by the use of dithizone which can be produced in any well-appointed laboratory. The method described is, though tedious, comparatively simple, and requires no complicated equipment. This method slightly modified and adapted to conditions obtaining in Poland, has been tried at the laboratory of Physiological Chemistry of the Warsaw Medical Academy.

ZAKHZEWSKI, K.; MAY, Z.; MALEC, J.; KRYSIAK, J.; KOWALSKI, E.; CETNAROWICZ, H.;
KOPEC, W.; SZOTT, Z.; WOZNIEWSKA, M.

Proteins and enzymes in conserved blood. Acta physiol. polon 3 Suppl.
3: 236-237 1952. (GLML 24:1)

1. Of the Institute of Hematology (Director--Docent A. Hansman, M.D.)
in Warsaw.

ZAKRZEWSKI, K. MAY, Z.

Biochemistry of preserved blood. I. Micro-molecular ketone bodies.
Acta physiol. polon. 4 no.1-2:149-154 1953. (GLML 25:4)

1. Of the Institute of Hematology (Director--Docent A. Hausman, M.D.),
Warsaw.

ZAKRZEWSKI K.

Krysiak, J., and Zakrzewski, K., Inst. hematol., Warszawa. *Biochemia krwi konserwowanej. II. Zdolnosc wiazania tlenu i dwutlenku wegla. Biochemistry of stored blood. II. Oxygen and carbon dioxide binding capacity ACTA PHYSIOL. POLON. 1953, 4/1-2 (155-158) Graphs 4

The oxygen capacity of blood preserved with acid citrate dextrose with antiseptics added did not change during 2 months storage. The oxygen and carbon dioxide content diminished slightly along with the carbon dioxide binding power.

Wehr - Warsaw

ZAKRZEWSKI, K.;MALEC, J.

Biochemistry of preserved blood. II. Proteins. Acta physiol. polon.
4 no.3:237-243 1953. (CML 25:5)

1. Of the Institute of Hematology (Director--Prof. A. Hausmann, M.D.),
Warsaw.

ZAKRZEWSKI, K.;MURAWSKI, K.;KRYSIK, J.

New method of determination of dextran in blood, urine, and tissue.
Acta physiol. polon. 4 no.3:253-257 1953. (CML 25:5)

1. Of the Division of Biochemistry of the Institute of Hematology
(Director--Prof. A. Hausmann, M.D.), Warsaw.

ZAKRZEWSKI, K.

New method of condensation of bacterial viruses. Med. dosw. mikrob.,
Warsz, 4 no. 3:385 1952. (CJML 23:3)

1. Summary of work progress presented at 11th Congress of Polish
Microbiologists held in Krakow may 1951. 2. Warsaw.

ZAKRZEWSKI, K.

Drying of plasma. K. Zakrzewski (Inst. Hematol., Warsaw). *Przemysl Chem.* 9, 63-9 (1953) (English summary).—Lyophilization as a method of stabilizing biol. liquids and systems and its theoretical basis are discussed. The technological principles of app. design are given.
Gene A. Wozny

ZAKREWSKI K.

4695. ZAKREWSKI K. * Preparatyka oczyszczonych frakcji białkowych osocza ludzkiego.
* Method of preparation of purified protein fractions of human plasma POL.ARCH.MED.
WENNET. 1953, 23/6a (1003-1012) Graphs 1 Tables 2

A general survey of clinical problems related to the individual plasma protein fractions.
The theoretical basis of present views on plasma fractionation is discussed and extensive reference is made to possible clinical applications.

Gutt - Bielsko

SO: Excerpta Medica, Section II, Vol 7, No 9

Zakrzewski, K.

POL.

Molecular structure of the products of dextran hydrolysis. K. Zakrzewski, I. Krysiak, K. Murawski, Z. Slay, and J. Krawiec (Inst. Hematol., Warsaw, Poland). *Acta Biochim. Polon.* 1, 27-45 (1954).—Dextran (I) (cf. Czechowika, *Pol. Arch. Med. Wewn.* 24, 1 (1954)) was fractionated by repeated pptns. with various concns. of EtOH. The fractions covered the mol. range of 20,000-60,000. The mol. wt.-diffusion const. and mol. wt.-viscosity relations show that the length of the short axis of the mols. remains const. through the mol. wt. range investigated, but the long axis varies in proportion to the mol. wt. The no. of glycosidic bonds other than the 1:6 decreases with degree of degradation of I; branching is not longer than a single glucose unit. The main chain of the mol. appears to be a helix composed of 4-6 glucose units per turn. The product of hydrolysis of native dextran contains fractions of high viscosity and low mol. wt., with very low branching. These fractions do not belong to the therapeutical preps. and they increase the erythrocyte sedimentation rate. I. Z. Roberts

ZAKRZEWSKI, K.

POLON

2 Sulfonic esters of hydrolyzed dextran (preliminary report). Kazimierz Zakrzewski and M. Wolnarowski (Inst. Hematol., Warsaw). *Acta Biochim. Polon.* 11, 285-91 (1964).—Dextran, fraction of mol. wt. 11,500-38,000 sulfonated in pyridine for 3-4 hrs. (cf. Rietts, C.A. 46, 8723f); gave a product contg. not more than 2.0 sulfonyl groups/glucose mol. Longer sulfonation caused changes in dextran structure. The heparin-like activity of the products was greater the greater the sulfonation; the best product had $\frac{1}{2}$ the activity of cryst. heparin. A slight nonspecific toxicity was assoc. with the highest mol. wt. products contg. the highest no. of SO_2 groups. I. Z. R.

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ZAKRZEWSKI K.

POL.

Dextran hydrolyzate, a homologous series of polysaccharides. K. Zakrzewski, J. Krysiak, K. Murawski, Z. May, and ~~Chakrabarti~~ (Inst. Hematol., Warsaw). *Bull. Acad. Polon. Sci. Classe II.* 2, 57-71 (1954).—The polysaccharides of the nontoxic therapeutically useful dextran hydrolyzate form a homologous series. Fractions of the hydrolyzate were isolated by repeated pptn. with EtOH at various temps., and the partial sp. vol., viscosity, diffusion const., mol. wt., and the no. of glycosidic bonds detd. There is a striking difference between the "toxic" and "therapeutic" series regarding their influence upon the erythrocyte sedimentation rate.

Olier L. Bari

Zakrzewski K.

3387

611.054.74 : 517.438.6 : 516.3

Zakrzewski K., Murawski K., Malec J., May Z., Krystak J. The Appli-
cation of Various Functions of Viscosity for Technical Analysis of
Dextran.

„Zastosowanie różnych funkcji lepkości do analizy technicznej dek-

stranu”. Przemysł Chemiczny. No. 4, 1954, pp. 209—211, fig., 2 tabs.

Four different functions of viscosity were applied to the viscosity data obtained for purified hydrolysed dextran fractions. When the coefficient of variation is 4.82, the intrinsic viscosity determined from the Martin equation gives maximum results with the smallest standard deviation from average. This viscosity can, with an absolutely satisfactory degree of accuracy, be determined for a given dextran sample from a single measurement by applying the formula

$$[\eta] = \frac{\ln \eta_r}{c} \cdot c \leq 1.$$

ZAKRZEWSKI, K.

ZAKRZEWSKI, K.; KOSCIELAK, J.; KORNACKA, L.

Oxidative phosphorylation in human erythrocytes. Acta physiol. polon.
5 no.4:617-618 1954.

1. Z Działu Biochemii Instytutu Hematologii w Warszawie. Dyrektor;
dr J. Trojanowski.

(ERYTHROCYTES, metabolism,
phosphorylation)

(PHOSPHORUS, in blood,
erythrocytic phosphorylation)

ZAKRZEWSKI, K.

GAWECKA, I.; VENULET, J.; WOJNAROWSKA, M.; ZAKRZEWSKI, K.

Sulfonated dextran with heparin-like action. Acta physiol. polon.
5 no.4:648-649 1954.

1. Z Instytutu Hematologii w Warszawie. Dyrektor: dr. I. Trojanowski.

Z Instytutu Lekow w Warszawie. Dyrektor: prof. dr P. Kubikowski.

(DEXTRAN,

sulfone-treated prep., heparin-like eff.)

(SULFONES, effects,

on dextran, heparin-like eff. of sulfonated dextran)

ZAKRZEWSKI, K.

538. Application of different viscosity functions to the analysis of technical dextran. ~~C. Zakrzewski~~
K. Murawski, J. Malec, Z. May and J. Krysiak
(Haematol. Inst., Warsaw) (*Przem. Chem.*, 1954,
10, 209-211).—Medicinal dextran must be of fixed
mol. wt. This is controlled by measurement of
viscosity which is a function of mol. wt. and
structure, $[\eta] = AM^a$; $[\eta]$ is found by measurement
of viscosity at various concentrations and extra-
polating to zero concn. Different graphs are
obtained depending on the function of viscosity
used. With Kraemer's function, $[\eta] = \lim_{c \rightarrow 0}$
 $\frac{\eta_r}{c}$, points lie on a straight line for concn. up to 1
per cent. The Phillipoff function $\eta_r = \left[1 + \frac{[\eta]c}{3}\right]^3$
gives the least satisfactory results. Martin's
empirical equation was also applied. The best
results are obtained when the coeff. of variation is
4-82. The intrinsic viscosity can be obtained for a
given dextran sample from a single measurement
with satisfactory exactness from the formula
 $[\eta] = \frac{\ln \eta_r}{c}$, when $c \leq 1$. A. O. JAKUBOVIC

4

CZECHOWSKA, Zofia; DUBROWSKI, Jerzy; HAUSMAN, Artur; KOSTRZEWSKA, Ewa;
KRYSIK, Janina; MURAWSKI, Krzysztof; PANASEWICS, Jozef. ZAKRZEWSKI,
Kazimierz

Poliglukan, partially hydrolyzed dextran solution with anti-shock
action. Polskie arch. med. wewn. 24 no.1:1-17 1954.

1. Z instytutu Hematologii a Warszawie, kierownik. Działu Biochemii
Instytutu Hematologii: dr K.Zakrzewski, Dyrektor Instytutu: doc.
dr A.Hausman.

(DEXTRAN,
hydrolyzed solution, ther. of shock)
(SHOCK, therapy,
dextran hydrolyzed solution)

KOSZIELAK, J.; MAY, Z; ZAKRZEWSKI, K.

Value of gamma globulin (immunoglobulin of the Warsaw Institute of Hematology) in prevention of measles). *Pediat.polska* 30 no.2:175-180 Feb '55.

1. Z Działu Biochemii Instytutu Hematologii w Warszawie.

Kierownik Instytutu: dr med. A. Trojanowski. Warszawa, Chocimska 5.

(GAMMA GLOBULIN, therapeutic use
measles prev.)

(MEASLES, PREVENTION AND CONTROL
gamma globulin)

ZAKRZEWSKI, KAZIMIERZ

Microbial determination of biological value of protein hydrolyzates used for intravenous feeding. Antonina Gryszkiewicz and Kazimierz Zakrzewski (Hematol. Inst., Warsaw). *Acta Polon. Pharm.* 13, 457-68 (1958) (English summary).--Total exogenous amino acids were detd. with a single microbiological assay using *Streptococcus faecalis* 6063. Low values were obtained as compared with the content of individual amino acids detd. with *S. faecalis* 9043 and *Leuconostoc mesenteroides* 6990. However, the former method is sufficiently accurate to reveal even slight differences in biol. values of 2 different hydrolyzates.

ALICE S. BARNETT

ZARCZEWSKI, K.

3

✓ The interaction between borate and dextran. K. Zar-
 czewski, Z. May, and K. Murawski (Inst. Hematol., War-
 saw, Poland). *Biokhimiya* 21, 596-592 (1954).—The pre-
 viously described dextran fractions were used in these expts.
 (C.A. 49, 4053c, 4935g). Homogeneous fractions of dex-
 tran dissolved in a borate buffer of pH 10 have an electro-
 phoretic mobility which is proportional to the mol. wt. of the
 dextran within the limits of 12,000-50,000. The rate of
 the electrophoretic mobility of dextran depends upon the
 molarity of the borate buffer. The greatest difference in
 the mobility rate of the different dextran fractions was re-
 corded in the buffer electrophoretic range of 0.045-0.035M.
 Above and below these limits the mobility rate of the dex-
 tran fractions is affected to an increasingly lesser degree by
 differences in the borate buffer molarity. Thus, a method
 has been established for the sepn. of dextrans of different
 mol. wts. The quantity of combined borate residuals con-
 siderably exceeds 1.5 for each glucose residual, a condition
 which obviates the possible formation of borate-glycol
 compds. The exptl. data accord with the assumption
 (hypothesis) that in the state of satn. each hydroxyl glucose
 group combines with one borate residual. B. S. Levine

ZAKRZEWSKI, A.

GRYSZKIEWICZ, A.; ZAKRZEWSKI, K.

Isolation and studies of properties of amylase in human serum. Acta
physiol. polon. 8 no.3:345-346 1957.

1. Z Zakładu Biochemii Klinicznej Instytutu Hematologii w Warszawie.

Kierownik: doc. dr K. Zakrzewski.

(AMYLASE, in blood

isolation & properties in human serum (Pol))

ZAKRZEWSKI, K.

KOSCIEIAK, J.; ZAKRZEWSKI, K.

Substance A from the erythrocytes. Acta physiol. polon. 8 no.3:
388-389 1957.

1. Z Zakladu Biochemii Klinicznej Instytutu Hematologii w Warszawie
Kierownik: doc. dr K. Zakrzewski.

(BLOOD GROUPS,

substance A in erythrocytes (Pol))

(ERYTHROCYTES,

blood group substance A (Pol))

ZAKRZEWSKI, K.
KRAUZE, R.; NAIMSKI, K.; ZAKRZEWSKI, K.

Fractionation of serum with zinc and aluminum ions in isolation of gamma globulin. I. Interaction of zinc ions with serum proteins. Acta physiol. polon. 8 no.3:397-399 1957.

1. Z Laboratorium Technologicznego Zarzadu Wytworni Surowic i Szczepionek w Warszawie.

(GAMMA GLOBULIN, determination,
fractionation with zinc ions (Pol))

(ZINC,
fractionation in isolation of gamma globulin (Pol))

KRAUZE, R.; NAIMSKI, K.; ZAKRZEWSKI, K.

Fractionation of serum with zinc and aluminum in isolation of gamma globulin. Acta physiol. polon. 8 nb.3:399-400 1957.

1. Z Laboratorium Technologicznego Zarzadu Wytworni Surowic i Szcepienek w Warszawie.

(ALUMINUM,

fractionation in isolation of gamma globulin (Pol))

(GAMMA GLOBULIN, determination,

fractionation with aluminum ions (Pol))

ZAKRZEWSKI, K.
MAY, Z.; ZAKRZEWSKI, K.

Electrophoretic characteristics of therapeutic dextran preparations.
Acta physiol. polon. 8 no.3:453-455 1957.

1. Z Zakladu Biochemii Instytutu Hematologii w Warszawie Kierownik
Zakladu: doc. dr K. Zakrzewski Dyrektor Instytutu: doc. dr A. Trojanowski.
(DEXTRAN, determination,
electrophoresis (Pol))

Zakrzewski A.
MURAWSKI, K.; ZAKRZEWSKI, K.

Studies on the application of globin solution as an anti-shock agent.
Acta physiol. polon. 8 no.3:472-473 1957.

1. Z Zakładu Biochemii Klinicznej Instytutu Hematologii w Warszawie.
Dyrektor Instytutu: doc. dr A. Trojanowski.

(HEMOGLOBIN,

globin solution, eff. on exper. shock (Pol))

(SHOCK: experimental,

eff. of globin solution (Pol))

ZAKRZEWSKI, K.; MALEC, J.; BALASIEWICZ, W.

Phosphorus turnover in leukocytes in vitro. Acta physiol. polon.
8 no.3:577-578 1957.

1. Z Zakladu Biochemii Klinicznej Instytutu Hematologii W Warszawie
Kierownik: dp. doc. dr K. Zakrzewski.

(PHOSPHORUS, in blood,

leukocytes, turnover in vitro (Pol))

(LEUKOCYTES, metabolism,

phosphorus turnover in vitro (Pol))

ZAKRZEWSKI, K.

K. ZAKRZEWSKI, J. M-LEC, "Survival of Human Circulatory Leucocytes in vitro: Life-Span and Nucleic Acid Turnover," Nature, Vol. 180, No. 4585, London, 14 Sep 57, pp. 551-552. Published from the Department of Biochemistry, Institute of Hematology, Warsaw.

MURAVSKIY, K. [Murawski, K.]; ZAKSHEVSKIY, K. [Zakrzewski, K.]

Production and certain chemical and pharmacological properties of esterified human globin [with summary in English]. Biokhimiia 22 no.5:789-793 S-O '57. (MIRA 11:1)

1. Otdeleniye biokhimii Instituta gematologii, Varshava.
(GLOBINS)

POLAND/Solid State Physics - Mechanical Properties.

E

Abs Jour : Ref Zhur Fizika, No 9, 1959, 20352

Author : Gabyszewska, B., Zakrzewski, M.

Inst : ..

Title : The Problem of Fracture in Hydrostatic Compression

Orig Pub : Przegl. mech., 1958, 17, No 2, 54-57

Abstract : No abstract.

Card 1/1

ZAKRZEWSKI, Kazimierz

Compensative treatment of disorders of water-electrolyte metabolism.
Polskie arch.med. wewn. 28 no.4:489-498 1958.

1. Z Instytutu Hematologii w Warszawie Dyrektor: doc dr med. A.
Trojanowski. Adres autora: Warszawa, ul. Chocimska 5- Inst.Hematologii.
(BODY FLUID BALANCE,
disordr., compensative ther. (Pol))

POSZWINSKI, P.; ZAKRZEWSKI, K.; MAY, Zofia

Prevention of thermal denaturation of serum albumin by sodium caprylate. Acta biochim.polon. 7 no.2/3:115-126 '60.

1. Dział Preparatów Krwiopochodnych i Zakład Biochemii Instytutu Hematologii w Warszawie.
(CAPRYLATES pharmacol)
(SERUM ALBUMIN chem)

ZAKRZEWSKI, K.

SYNOPSIS: L.
JOURNAL (in copy); Given Name

Country: Poland

Anatomic District: [Not given]

Affiliation: Biochemistry Department of the Hematology Institute (Zaklad Biochemii Instytut Hematologii), Warsaw

Source: Warsaw, Przegląd Lekarski, No 5, 1961, pp 193-194.

Data: "Electrophoretic Determination of Fetal Hemoglobin"

Co-authors:

ZAKRZEWSKI, K. Biochemistry Department of the Hematology Institute, Warsaw
ZAKRZEWSKI, K. Biochemistry Department of the Hematology Institute, Warsaw

KRAUZE, R.; NAIMSKI, K.[deceased]; ZAKRZEWSKI, K.

Isolation of γ -globulins by means of zinc and aluminium salts. Acta
biochim. polon. 8 no.2:209-217 '61.

1. The Research Laboratory, Serum and Vaccine Production Board, and
The Department of Biochemistry, Institute of Haematology, Warsaw.
(GAMMA GLOBULIN chem)

HORODKO, Janina; MIKIEWICZ, Barbara; NAIMSKI, Krzysztof[deceased];
ZAKRZEWSKI, Kazimierz

Effect of potassium and sodium ions on the synthesis of diphtheria
toxin. Acta microbiol. pol. 10 no.2:141-146 '61.

1. Z Centralnego Laboratorium Zjednoczenia Wytworni Surowic i Szczepionek
"Biomed" w Warszawie.

(POTASSIUM pharmacol) (SODIUM pharmacol)
(CORYNEBACTERIUM DIPHTHERIAE pharmacol)
(TOXINS AND ANTITOXINS)

HORODKO, Janina; KRASSOWSKA, Ligia; NAIMSKI, Krzysztof [deceased];
ZAKRZEWSKI, Kazimierz

Continuous cultivation of *Salmonella typhi* for the production of
anti-typhoid vaccines. Acta microbiol. pol. 10 no.4:351-369 '61.

1. Z Centralnego Laboratorium Zjednoczenia Wytworni Surowic i
Szczepionek "Biomed" w Warszawie.
(*SALMONELLA TYPHOSA* culture) (VACCINES)

KAKOWSKA-LIPINSKA, Izabela; NAIMSKI, Krzysztof [deceased]; SIENKIEWICZ, Irena;
ZAKRZEWSKI, Kazimierz

Isolation of immune globulins from sera of hyperimmunized animals with
the aid of zinc ion fractionation. Med.dosw.mikrob. 13 no.4:363-376
'61.

1. Z Centralnego Laboratorium Zjednoczenia Wytworni Surowic i
Szczepionek "Biomed" w Warszawie.

(SERUM GLOBULINS chem)

BALASIEWICZ, Wanda; PAWELSKI, Slawomir; WOLOSEWICZ, Halina; ZAKRZEWSKI, Kazimierz

Distribution of radioactive phosphorus in the erythrocytes and bone marrow cells during the course of therapy of polycythemia vera.

I. Intra-oral administration of P32. Polski tygod. lek. 16 no.14: 510-514 3 Ap '61.

1. Z Dzialu Biochemii; kierownik: doc. dr med. K. Zakrzewski i z Oddzialu Hematologicznego; kierownik: dr med. S. Pawelski - Instytutu Hematologii; dyrektor: doc. dr med. A. Trojanowski.

(POLYCYTHEMIA VERA radiother)
(PHOSPHORUS radioactive)
(ERYTHROCYTES chem)
(BONE MARROW chem)

MISZCZAK-LOCH, T.; MURAWSKI, K.; ZAKRZEWSKI, K.

Haptoglobin types in Poland. Folia biol 10 no.3/4:321 '62.

1. Institute of Nuclear Investigations, Polish Academy of Sciences,
Warsaw.

*

KOSCIELAK, J.; GROCHOWSKA, E.; ZAKRZEWSKI, K.

The influence of purification on the activity of blood group factor
A from human erythrocytes. Postepy biochem. 8 no.4:584-585 '62.

1. Z Instytutu im. Listera w Londynie i Instytutu Hematologii w
Warszawie.

(BLOOD GROUPS)

(ERYTHROCYTES)

ROWINSKI, Bogdan; ZAKRZEWSKI, Konstanty

Diagnosis and therapy of women with recognized erosions based upon comparative cysto-histological studies. Gin. polska 32 no.4:477-490 '61.

1. Z Przychodni Ginekologicznej i Oddziału Położniczo-Ginekologicznego Szpitala Miejskiego w Rybniku Kierownik Przychodni i Ordynator Oddziału: dr B. Rowinski
(CERVIX UTERI dis)

S/081/63/000/002/055/088
B171/B102

AUTHORS:

Rościszewski, Paweł, Zakrzewski, Lech, Zieliński, Witold

TITLE:

Direct synthesis of alkyl chlorosilanes

PERIODICAL:

Referativnyy zhurnal. Khimiya, no. 2, 1963, 404-405;
abstract 2N43 (Polish patent 44883, Sept. 21, 1961)

TEXT: Alkyl chlorosilanes are prepared from Si and RCl (R-alkyl) on a Cu catalyst (CT) at 250-400°C. In certain methods of synthesis, besides the most valuable R_2SiCl_2 other compounds such as $RSiCl_3$, R_3SiCl , $RSiHCl_2$, R_4Si , $SiHCl_3$, $SiCl_4$ and traces of some aliphatic hydrocarbons also are separated from the reaction mixture. The Cu-CT may activate the pyrolysis of RCl. The importance of these side reactions can be reduced by supplying RCl without excess and at a rate depending on operating conditions, such as: the activity of the reacting solid phase (Si and Cu); the temperature and contact conditions of the gaseous and solid phases, i.e. the fineness of the contact mass; the speed and method of stirring; the design and dimensions of the reactor, and so on.

Card 1/4

S/081/63/000/002/055/088
B171/B102

Direct synthesis of alkyl ...

The pyrolysis of RCl occurs when the rate of its supply in the reaction zone exceeds a certain optimum value depending on the conditions of operation. According to the present patent, the rate of supply of RCl is modified when the activity of the contact mass and other parameters, such as temperature, are changed. The reaction is started by supplying RCl at a low rate, which is gradually increased as the rate of reaction increases and is then decreased toward the end of the process. It is possible to obtain a practically constant content of R_2SiCl_2 (40-70%)

in the reaction products by regulating the rate of supply of RCl in order to ensure that the H_2 - content in uncondensable waste gases (not counting the unreacted RCl) is $\leq 25\%$, that the content of CH_4 and of other hydrocarbons is $\leq 50\%$, and that the total quantity of waste gases is $\leq 20\%$ of RCl supplied. Under a constant load of 53 l/hr per 1 kg of Cu-CT, the yield of R_2SiCl_2 decreases during the reaction (25-110 hrs) from ~ 24 to $\sim 5\%$. When the proposed method is applied, the yield of R_2SiCl_2 is maintained during a period of 45-220 hrs at an almost constant value: 54-58%. This is achieved by the use of a CT load of 16 l/hr per

Card 2/4

S/081/63/000/002/055/088
B171/B102

Direct synthesis of alkyl ...

1 kg Cu during 45-70 hrs, of 25 l/hr per 1 kg Cu during 70-180 hrs, and of 16 l/hr per 1 kg Cu during 180-220 hrs. 250 g of a mixture, containing 85% of technically pure Si and 15% of Cu-powder are agglomerated at 1100°C in an atmosphere of H_2 , ground in a mortar, sieved through mesh openings of 0.09 mm, and poured into a horizontal glass reactor (RT), 100 cm long and having a diameter of 36 mm. The RT is heated to 270°C and the contact mass is dried during 5 hrs in an atmosphere of N_2 . CH_3Cl is passed through the RT during 16 hrs at the rate of 35 ml/min, then during 78 hrs at the rate of 65 ml/min, and the process is discontinued. The products are water-cooled and the unreacted CH_3Cl is separated in a condenser immersed in a cooling mixture at -70°C. The uncondensable gases escape at the rate of 3-5 ml/min, then at the rate of 10-12 ml/min which corresponds to 15-18% of CH_3Cl supplied. The waste gases contain ~25% of water, ~45% of CH_4 and of other hydrocarbons, and 25% of CH_3Cl . The content of $(CH_3)_2SiCl_2$ in the reacting mass is 67% after 64 hrs, with 10% of $(CH_3)_3SiCl$ and 9% of CH_3SiCl_3 , and 69% after 94 hrs, with 4% of

Card 3/4

Direct synthesis of alkyl ...

S/081/63/000/002/055/088
B171/B102

$(\text{CH}_3)_3\text{SiCl}$ and 10% of CH_3SiCl_3 . The authors give an example of a similar reaction carried out in a steel RT. [Abstracter's note: Complete translation.]

Card 4/4

SADOWSKA, Wanda; ZAKRZEWSKI, Lech; FEJGIN, Jerzy

Stabilization of polyformaldehyde. Pt. 1. Przem chem 41 no.1:40-43
Ja '62.

1. Instytut Tworzyw Sztucznych, Warszawa

S/191/60/000/005/016/020
B004/B064

AUTHORS: Feigin, E., Zakrzewski, L. (People's Republic of Poland)

TITLE: Methods of Rating Some Properties of Polyformaldehyde

PERIODICAL: Plasticheskiye massy, 1960, No. 5, pp. 60-63

TEXT: The authors describe simple methods of determining the properties of polyformaldehyde, a polymer not marketed until 1959: 1) The thermal stability is determined by measuring the loss in weight of a weighed portion in a nitrogen current at given temperature and time of heating. A weighed portion of 0.45-0.60 g, a temperature of $(210 \pm 0.6)^{\circ}\text{C}$, a velocity of the nitrogen current of 2-3 m/sec, three times weighing at intervals of 10 minutes, and calculation of the mean value K_m of the weight loss proved to be optimum. 2) The intrinsic viscosity was determined by the Ubbelohde viscosimeter at concentrations of the polyformaldehyde solution in dimethyl formamide of 0.5 g/100 ml, dissolution occurred at 150°C , and the viscosity was measured at 140°C . The intrinsic viscosity $[\eta]$ is calculated by the equation of Huggins with the constant being equal to 0.72. 3) Fusibility


Card 1/2

Methods of Rating Some Properties of
Polyformaldehyde

S/191/60/000/005/016/020
B004/B064

was determined at 190°C with a plastometer. The amount a of polymer pressed out of the plastometer in one minute is weighed. The coefficient of fusibility T is found to be $T = a \cdot 10$. Technically pure polyformaldehyde should have the following values: $K_m < 0.8$, $[\eta] = 0.4 - 2.0$, $T = 4 - 30$.

The authors established a relationship between $[\eta]$ and T (at low $[\eta]$, T rises). There is, however, no relationship between $[\eta]$ and K_m . In samples with high $[\eta]$, K_m was frequently found to be low. There are 1 figure, 7 tables, and 10 non-Soviet references.



Card 2/2

P/014/60/039/008/002/002
A224/A026

AUTHORS: Tomaszewicz, Maria, Feigin, Jerzy, and Zakrzewski, Lech

TITLE: Polymerization Study of Gaseous Formaldehyde to Macromolecular Products

PERIODICAL: Przemysł Chemiczny, 1960, Vol. 39, No. 8, pp. 509-513

TEXT: The polymerization processing of gaseous formaldehyde (CH_2O) into macromolecular products is studied in order to determine the optimum conditions for preparing macromolecular polymers, which after an additional thermal stabilization would be suitable for further processing by shot or extrusion-molding methods. Experiments are conducted with the setup shown on page 510 and the results are compiled in 7 tables. Based on these experimental results, the authors determine the following optimum parameters for the polymerization process: 1) source of gaseous formaldehyde: α -polyoxymethylene; 2) process medium: extraction benzene II; 3) initiator: p-dimethylaminobenzaldehyde in the amount of 0.01 % of the polymer mass; 4) stabilizer: diphenylamine in the amount of about 0.04 % of the polymer mass; 5) temperature: about 20°C ; and 6) decomposition rate of α -polyoxymethylene: 1 g/min. There are 7 tables, 1 fi.

Card 1/2


P/O14/60/039/008/002/002
A224/A026

Polymerization Study of Gaseous Formaldehyde to Macromolecular Products

gure and 24 references: 18 English and 6 Polish.

ASSOCIATION: Instytut Tworzyw Sztucznych, Warszawa (Institut of Plastics, Warszawa)

SUBMITTED: March 5, 1960



Card 2/2

TOMASZEWICZ, Maria; PEJGIN, Jerzy; ZAKRZEWSKI, Lech

Studies on the polymerization of gaseous formaldehyde to high-molecular products. Przem chem 39 no.8:509-513 Ag '60.

1. Instytut Tworzyw Sztucznych, Warszawa -

SADOWSKA, Wanda; ZAKRZEWSKI, Lech; FEJGIN, Jerzy

Stabilization of polyformaldehyde. Pt. 1. Przem chem 41 no.1:
40-43 Ja '62.

ZAKRZEWSKI, Marek; POREBSKI, Tadeusz

Research on certain nonsinusoidal spectra of fatigue stresses.
Rozpr inz PAN 10 no.3:430-441 '62.

1. Politechnika, Wroclaw.

ZAKRZEWSKI, Marek, doc. dr. inż.; POREBSKI, Tadeusz, dr. inż.

The pulsator for fatigue strength testing at biharmonic stress spectra. Pomiary 8 no.7:314-317 J1 '62.

1. Politechnika, Wrocław.

P/006/62/010/003/001/006
D237/D308

AUTHORS: Zakrzewski, Marek and Porębski, Tadeusz
TITLE: Investigation of certain non-sinusoidal spectra of fatigue loads
PERIODICAL: Rozprawy inżynierskie, v. 10, no. 3, 1962, 431-440

TEXT: The authors investigated the influence of the duration of tensile and compressive stresses in a fatigue load cycle on the fatigue strength. Four different load spectra, two harmonic and two biharmonic differing from each other by the relative duration of the compressive and tensile loads in the load cycle were applied to identical brass test-pieces by means of a fatigue pulsator, developed at the Laboratorium Wytrzymałości Materiałów (Strength of Materials Laboratory) of the Wrocław Polytechnic. The applied stresses were chosen so as to result in a fatigue rupture after 10^5 - 10^6 cycles. It was found that the number of cycles applied to the sample before the rupture occurred was nearly inversely proportional to the relative duration of the tensile load. The authors

Card 1/2

Investigation of certain ...

P/006/62/010/003/001/006
D237/D308

conclude that tensile stresses play a decisive part in the metal fatigue processes and that their duration should be recognized as yet another factor influencing metal fatigue. There are 6 figures and 1 table.

ASSOCIATION: Politechnika Wrocławska (Wrocław Polytechnic) ✓

SUBMITTED: September 30, 1961

Card 2/2

ZAKRZEWSKI, Marek, prof.dr inż.; POREBSKI, Tadeusz, dr inż.

Contemporary methods of determining the fatigue durability
in nonsinusoidal spectra of fatigue stresses. Przegl mech
21 no.17:517-521 10 S '62.

1. Politechnika, Wrocław.

S/123/62/000/021/001/002
A006/A101

AUTHOR: Zakrzewski, M.

TITLE: On the breakdown of bonds in materials during the fatigue process

PERIODICAL: Referativnyy zhurnal, Mashinostroyeniye, no. 21, 1962, 13, abstract 21A69 ("Ermuedungsfestigk. Werkstoffen und Bauelement. Votr. Warschauer Tagung 12. - 14. Mai 1960", Warszawa, 1961, 133 - 134, German)

TEXT: The author reviews a report delivered at the Conference on fatigue in Warsaw, in May 1960. In this paper the basic concepts of the theory of fatigue failure were expounded. This theory is based on an analogy between the phenomena of melting and breakdown of bonds in the material caused by the effect of mechanical stresses. According to this theory, the strength of the material can be described by the following formula:

$$\sigma_0 = \frac{GE}{3G - E} \int_0^{T_m} \alpha_t \cdot dT,$$

where σ_0 is the critical stress in manifold uniform extension, E and G are moduli
Card 1/2

On the breakdown of bonds in...

S/123/62/000/021/001/002
A006/A101

of elasticity, α_t is the linear coefficient of thermal expansion, T_m is the melting point of the material.

A. Usov

[Abstracter's note: Complete translation]

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P/034/62/000/007/002/003
D265/D308

AUTHORS: Zakrzewski, Marek, Docent, Doctor of Engineering
and Porębski, Tadeusz, Doctor of Engineering

TITLE: Construction of a pulsator for the investigation
of fatigue endurance in bi-harmonic stress spectra

PERIODICAL: Pomiary, automatyka, kontrola no. 7, 1962, 314-317

TEXT: The principle of the pulsator developed at the Labor-
atorium Wytrzymałości Materiałów Politechniki Wrocławskiej (Strength of
Materials Laboratory of the Wrocław Polytechnic Institute) is based on
two sets of rotating masses. Two equal masses of each set rotate at con-
stant angular velocities in opposite directions eliminating thus hori-
zontal components of their centrifugal forces. Each set of masses has
different constant speed providing thus bi-harmonic stresses in the
specimen under test. The construction is shown in Fig. 3, where 1 - gear
box, 2 - driving gear box, 3 and 4 - large and small revolving discs
carrying point masses of lead, 5 - DC-motor, 6 - DC-generator, 7 - syn-

Card 1/2 Z

Construction of a pulsator ...

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chronous motor, 8 - clutch to eliminate gear backlash. The test specimens, oscillographs and the measuring equipment recording the speed and stresses during the tests are described. Experimental results obtained are stated to be accurate within 2 - 3 % as compared with those calculated by analytical methods. There are 9 figures.

ASSOCIATION: Politechnika Wroclawska (Polytechnic Institute of Wroclaw)

Card 2/1 2

ZAKRZEWSKI, MAREK

TECHNOLOGY

ZAKRZEWSKI, MAREK. Hipoteza zlomu kruchego. Wrocław, (Państwowe Wydawn.
Naukowe) 1958. 92 p. (Wrocławskie Towarzystwo Naukowe. Prace, seria
B, nr. 94) (Hypothesis concerning conditions of parting rupture. English summary
illus., bibl., footnotes, graphs, tables)

Vol. 103, no. 1, Jan. 1959

Monthly Index of East European Accessions (EMAI) LC, Vol. 7, No. 12, Dec. '58

BOWKIEWICZ, Janusz; KLAMUT, Marian; ZAKRZEWSKI, Mieczysław; ZAIUSKA, Jozef

Automatic syringe for angiography. Pol. przegląd. radiol. 29 no.4:
445-454 J1-Ag '65.

1. Z Pracowni Rentgenodiagnostycznej Szpitala Bielańskiego w
Warszawie (Kierownik: dr. med. J. Bowkiewicz).

P/014/62/041/001/004/004
D204/D304

AUTHORS: Sadowska, Wanda, Zakrzewski, Lech, and Fejgin, Jerzy

TITLE: Stabilization of polyformaldehyde (PFA), Part I.

PERIODICAL: Przemysł chemiczny, v. 41, no. 1, 1962, 40 - 43

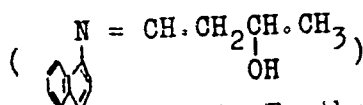
TEXT: The object of this work was to compare the effect of a number of anti-oxidants on preventing the decomposition of PFA. 23 Commercial anti-oxidants, chiefly amines and phenols, were tried on acetylated PFA, by measuring (1) the thermal degradation coefficient, k , defined as the percentage loss in weight per minute on heating at 210°C and (2) the reduced viscosity, at 140°C. Ubbelohde's viscometer was employed for the latter tests, on solutions containing 0.5 g PFA in 100 ml of solvent (dimethyl formamide + 0.5 % diphenylamine). Measured quantities of stabilizers were added to the PFA which was then treated according to ASTM D 1238-52 T and tested as above. It was found that the most effective stabilizers were the aryl derivatives of naphthylamine and p-diphenyl diamine and several alkylated phenols. Organic sulphides showed no stabili-

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Stabilization of polyformaldehyde ...

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D204/D304

zing effects. Additional investigations, using the most promising stabilizers at 210°C, showed that the optimum concentrations were: anti-oxidant 4010 - 0.5 %, Nonox WSP - 1.0 %, anti-oxidant AH - 0.25 %, Topanol A - 2.0 %, Nonox EX - 2.0 %, Age Rite Resin D - 0.5%.
Antioxidant AH



is therefore thought to be the best. Further research on the stabilization of PFA will be carried out using mixtures of anti-oxidants and polyamides and determining the induction period before decomposition. There are 5 tables and 16 references: 3 Soviet-bloc and 13 non-Soviet-bloc. The 4 most recent references to the English-language publications read as follows: U.S. Patent 2,893,972 (1959) U.S. Pat. 2,936,298 (1960); Brit.Pat. 835,841 (1960); Brit.Pat. 854,278 (1960).

ASSOCIATION: Instytut tworzyw sztucznych (Synthetic Materials Institute)

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